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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

BRODEUR et al

Atty. Ref.: 11-843

Serial No. 09/063,377

Group: 1733

Filed: April 21, 1998

Examiner: Yao

For: REINFORCED FOAM BACKED CARPET

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OCT 31 2002  
TC 1700

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

EVIDENTIARY DECLARATION OF EDOUARD A. BRODEUR, JR.

I, Edouard A. Brodeur, Jr., hereby say and declare:

1. I am one of the co-inventors of the invention claimed in the above-identified application. My resume is attached hereto as Exhibit A. On an essentially daily basis, I have been working with carpets, carpet backings, and the manufacture of appropriate carpeting or like flooring surfaces for more than thirty years. I am familiar with virtually all types of commercial carpeting sold in the United States.

2. I am familiar with the patent owned by Collins & Aikman Products Co. that has been applied against the claims in this case, namely USP 5,567,497 to Zegler et al ("Zegler"). The carpeting of Zegler is representative of the prior art over which the invention is an improvement, and has the doming and curling problems that the invention solves.

3. The invention utilizes an open mesh fiber reinforced foam layer with foam nodules that is adhered to a carpet tile or roll precoat so as to produce a carpet tile or roll that is substantially prevented from curling or doming, for example by applying a non-fused adhesive formulation to the relatively smooth back face of the carpet, and then fusing the adhesive at a temperature low enough to prevent the collapse of the foam nodules of the open mesh fiber reinforced foam layer (e.g. a maximum temperature of about 310 degrees F).

4. What Zegler do, distinct from the invention, is to produce a non-slip floor covering by providing strips and channels of web plastisol from the back of carpeting prior to fusing the back layer. In Zegler a blowing agent is provided in the contact layer 40 which is attached to the backing layer. Then when the combined carpet backing is exposed to fusing temperatures [see col. 5, last paragraph of Zegler] carbon dioxide gas is generated and the contact layer is foamed to provide a lower density. By applying fusing temperatures sufficient to generate carbon dioxide gas in a non-foamed contact layer, Zegler provides a teaching specifically contrary to the invention, and it is this procedure that produces a Zegler product that will have doming or curling. The process of the invention insures that the type of differential expansion and contraction (with the associated undesirable stresses) that occur in Zegler as a result of this *in situ* foaming of the backing do not occur; that is by adhering the already formed foam layer with foamed nodules backing in contact with the precoat, the invention avoids the

stresses associated with differential expansion and contraction that exist in Zegler and the other prior art.

5. In the embodiment of Zegler describing the contact layer 70, there is no disclosure that the layer 70 is foam, let alone the particular foam layer set forth in claim 1. Even if the contact layer is ever foamed, however, it is foamed in the manner described in column 5, lines 55-65 of Zegler, that is the same way that the contact layer 40 is foamed, in contact with the carpeting, and thus having the doming and curling problems substantially avoided by the invention of claim 1.

6. The Zegler carpeting backing is not inherently dimensionally stable, and is not substantially doming and curling-free. Rather it is not dimensionally stable, and because of the procedure described in column 5, last paragraph, has doming and curling.

7. What is recited in claim 2 of this application, namely applying a non-fused adhesive to the precoat, and fusing the adhesive at a temperature low enough to prevent collapse of the already existing foam nodules of the foam layer, is specifically contrary to Zegler. As discussed above, in Zegler it is necessary to apply heating to the backing sufficient to generate foaming gases [col. 5, last paragraph], not to fuse an adhesive. Zegler's preferred temperature for doing this is described in column 7, lines 33-56, where the step earlier described in column 5, last paragraph is set forth in more detail. The temperature in column 7, lines 49 and 50 is 175-240 degrees C, a minimum of 20 degrees C MORE THAN the maximum temperature set forth in claim 3, the

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preferred embodiment for the method of claim 2. Since the purpose of applying temperature in Zegler is different than that of procedure c) of claims 1-3, that significant difference is not surprising. One would not get Zegler's results if one used the significantly lower temperature according to claim 3 (maximum of 310 degrees F).

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date

6 July 2000



Edouard A. Brodeur, Jr.

Edouard A. Brodeur Jr.

Born: Worcester, Mass. 29 March 1922

Education: B.S. Physical Chemistry

B.S. Naval Science

M.S. Physical Chemistry

World War 2: US Navy; Captain LST; Commander Pacific Task Unit 72.2.2

Married 52 years; two living children; three grand children

Parents: <sup>SIX</sup> ~~Five~~ issued; <sup>FOUR</sup> ~~three~~ in process

**Business Experience:**

1947-57 Development and research chemist; Uniroyal: Latex and plastic technology

1957-65 General Manager, Best Manufacturing, Menlo Ga. Tillotson Rubber Co. Needham Heights, Mass.

1965-69 Founder and President, Gen Industries ; Newton N.C. Research Coatings; Adairsville, Ga. Custom formulator for the vinyl industry and commercial carpeting.

1969-75 Owner of Research Coatings of Georgia; Rome Ga. Custom formulator for commercial carpeting; Vinyl consulting worldwide.

1975-98 Founder, co-owner, president of Supreme Allweather Surfaces, Cartersville, Ga. Manufacturer of indoor/outdoor sport surfaces including Supreme Court (best known surface in the indoor tennis world)

1969-now General consultant to the vinyl industry, specializing in the training and teaching of formulating and testing and the general use of PVC. I have been involved in the design and start up of just about all walk off mat plants and carpet tile plants in the South East as well as several outside of this country.

**CLIENTS:** (partial list)

Walk Off Mats: Outside Carpets; Hermitage Mills; Apache Mills; Crossville Rubber; Southeast Mat Ludlow Composites

Automotive Filters: Fram Corp.; Purolator; Wix; Hastings; Walmi Filtrionis (Mexico)

Commercial Carpers: Barwick Mills; Wellco(Manington); J&J; DLW (Germany); CTIP Engineering (Roma Italy); Yan Shan Petrochemicals Beiging China; Collins & Aikman; Sherman & Williams;

BASF; Occidental Chemical

Carpet Tiles: Barwick Mills; Hermitage; Interface; JTI; Collins & Aikman; Wellco; Burlington Industries; Shaw.

**Miscellaneous PVC**

1996 -now Ludlow Composites Freemont Ohio ; 10 days/month ; miscellaneous PVC solid and foam products.

1997-now Vantage Industries (Leggett & Platt) Atlanta; 10 days/month Foam rug underlays and misc foam PVC products

1996 Yentai China set up carpet underlay operation

1996 Three months training foreign licensees for Occidental Chemical Co.

**Miscellaneous Legal and Court cases**

Several months as expert witness in Collins & Aikman patent infringement litigation

Einstein Moomgy/IBM product liability litigations

Kelsey Construction carpet tile odor litigations Orlando, Fla.

Calhoun Chemical product liability.

Shaw Industries patent infringement litigation.

Burlington Industries patent infringement litigation

Interface Flooring product liability problems

Wellco Industries patent infringement.

**Tennis Courts:** Many times on the advisory board of the ATP (Association of Tennis Professionals)

Numerous articles in tennis publications. Six page feature article in Sports Illustrated (April 1980)